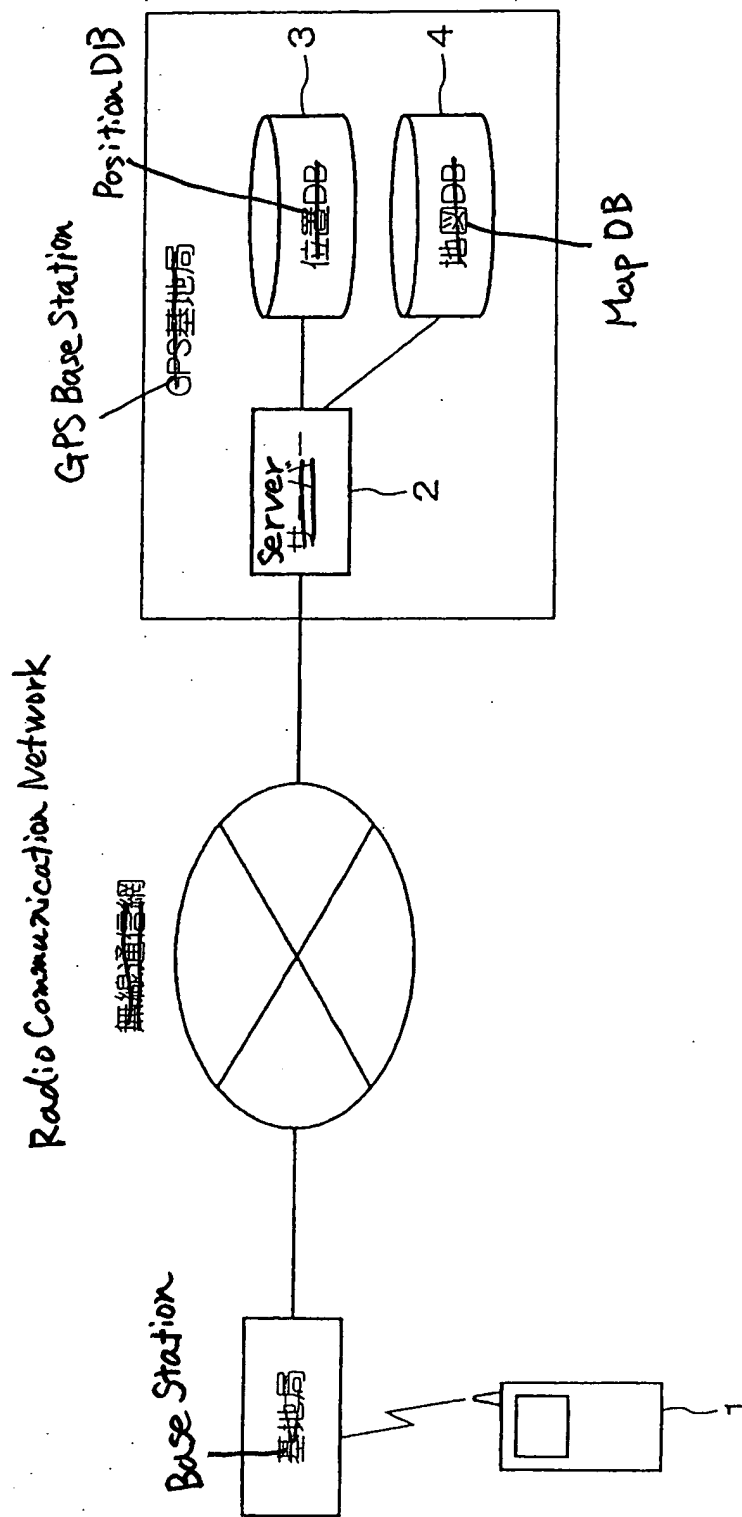


Fig. 1



# Fig.2

Item	Group	Position Database <del>位置データベース</del>	Phone No. <del>電話番号</del>	URL	Latitude <del>緯度</del>	Longitude <del>経度</del>
SHOP A	S	03-3333-0000	www.shopa.com	38.57	135.54	
SHOP B	S	03-3333-0001	www.shopb.com	45.63	138.73	
RESTAURANT C	R	03-3333-0002	www.restc.com	35.36	125.61	
.	.	.	.	.	.	.
.	.	.	.	.	.	.
.	.	.	.	.	.	.

Communication Module

(A Part of) Contents of RAM

Latitude		Longitude		Azimuth Angle	
Item	Latitude	Longitude	Azimuth Angle	Item	Azimuth Angle
ME	①37.45	②135.01	⑤60deg	ME	⑤60deg
SHOP A	③38.57	④135.54	⑥40deg	SHOP A	⑥40deg

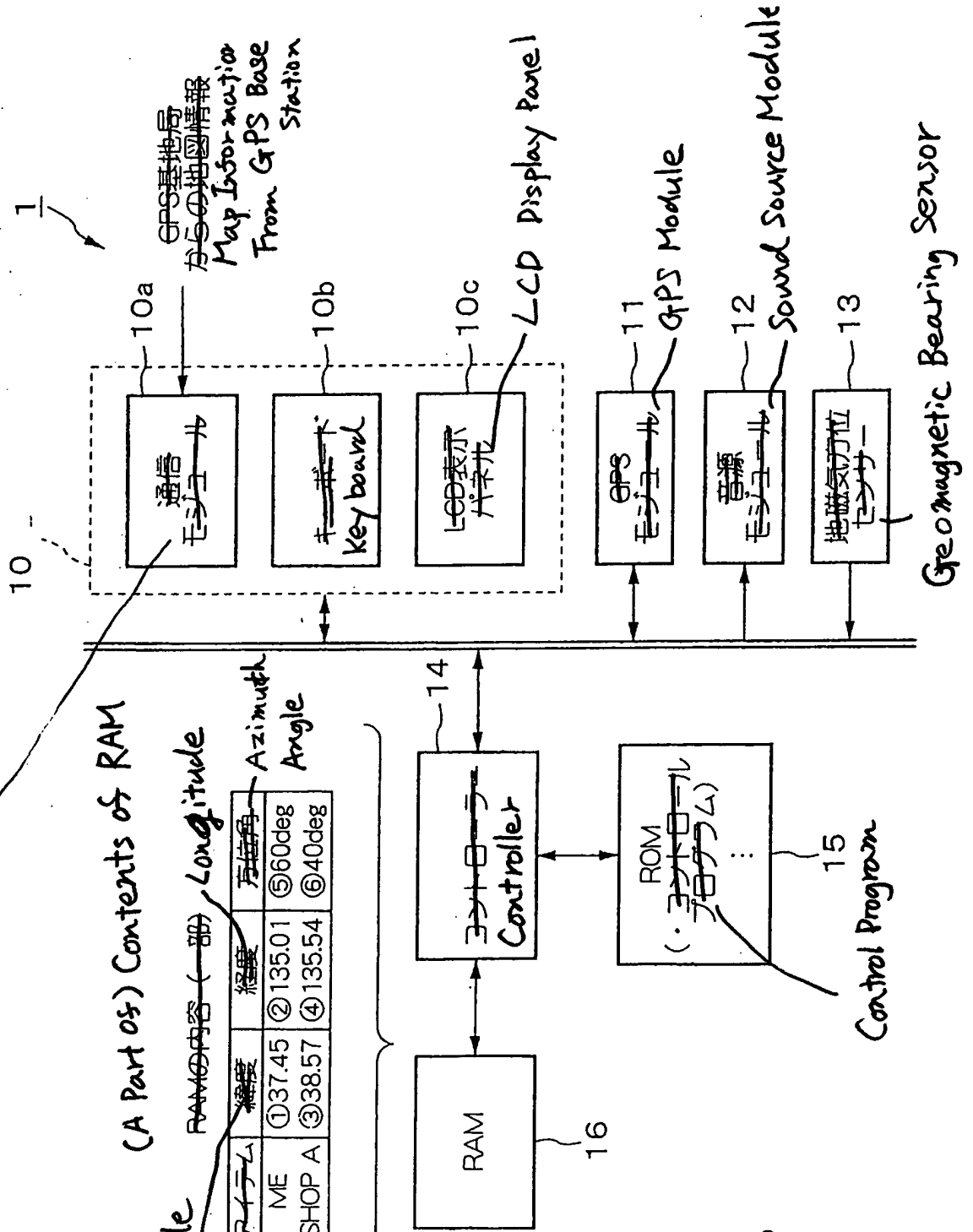
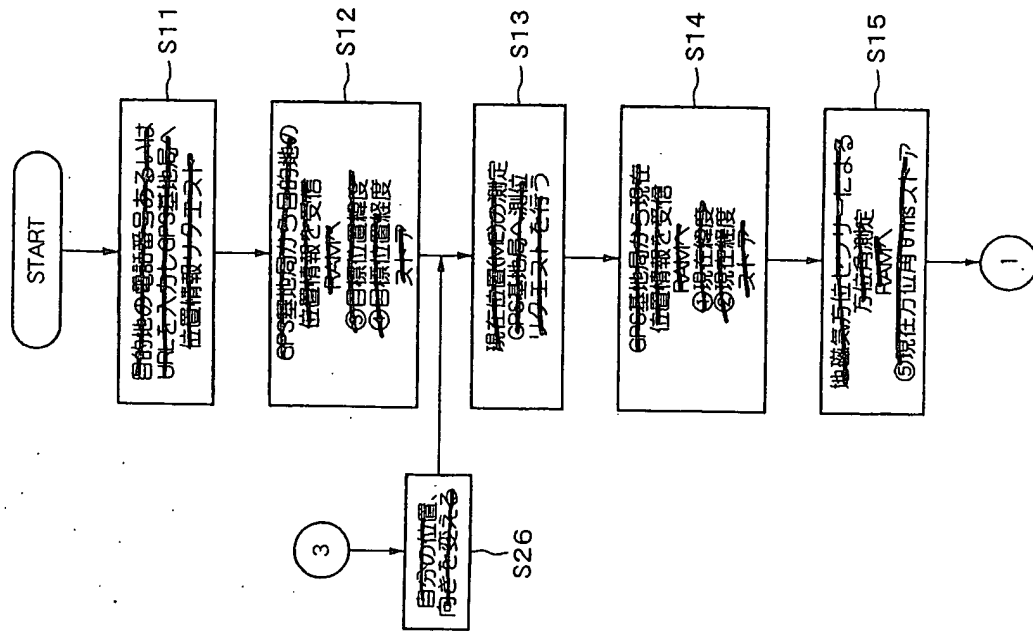


Fig. 3

Fig. 4



- S11 input a phone number or URL of the destination, request a GPS base station to send positional information
- S12 receive the positional information of the destination from the GPS base station, store ③ target position latitude ④ target position longitude in RAM
- S13 measure the current position (ME), issue a position measuring request to the GPS base station
- S14 receive current positional information from the GPS base station, store ① present latitude ② present longitude in RAM (S14)
- S15 measure an azimuth angle by a geomagnetic bearing sensor, store ⑤ present azimuth angle  $\theta$  ms in RAM
- S26 change the user's own position or direction

Fig. 5

- S16 request the GPS base station to send map information containing the target position and the current position
- S17 download the map information
- S18 display a target position icon, a current position icon, a current bearing icon on an LCD panel to overlap mutually on a map

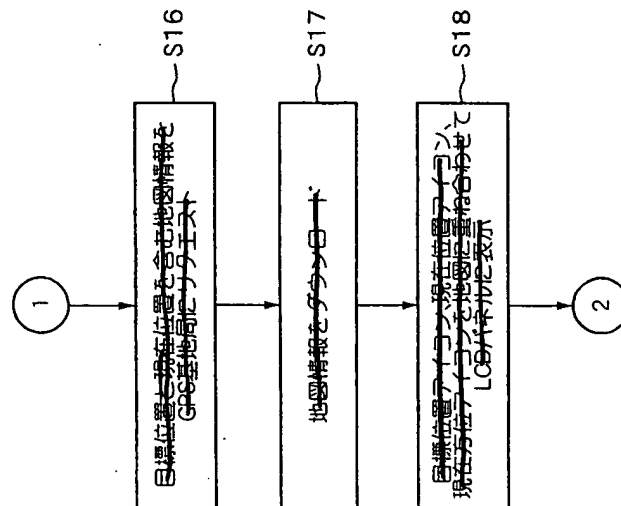
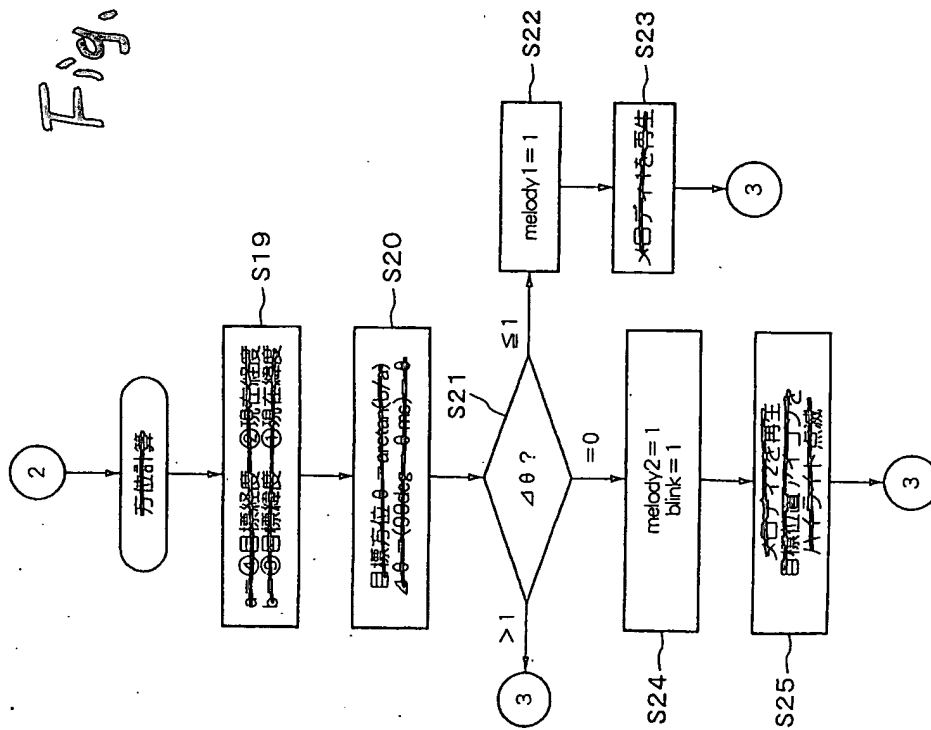


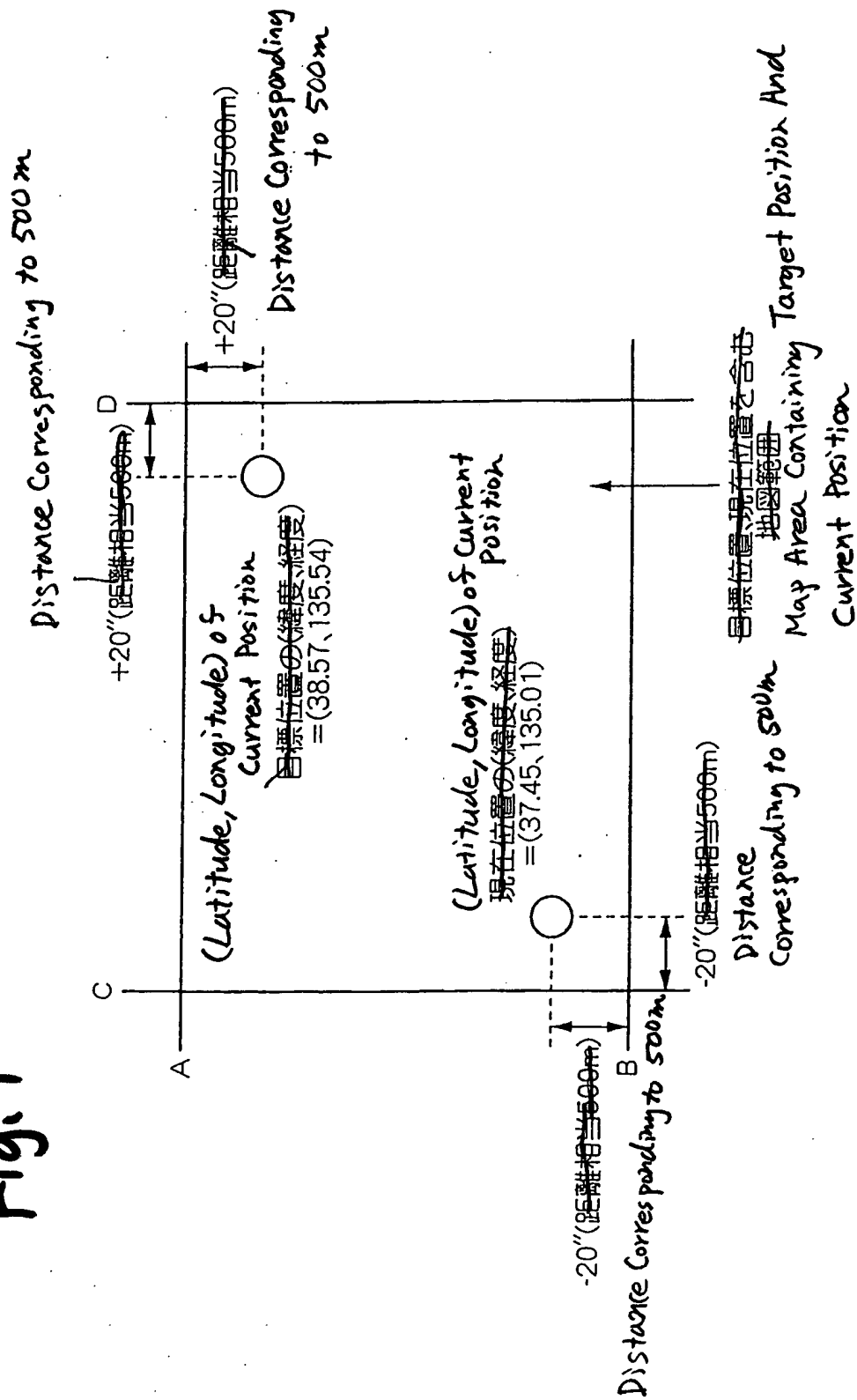
Fig. 6

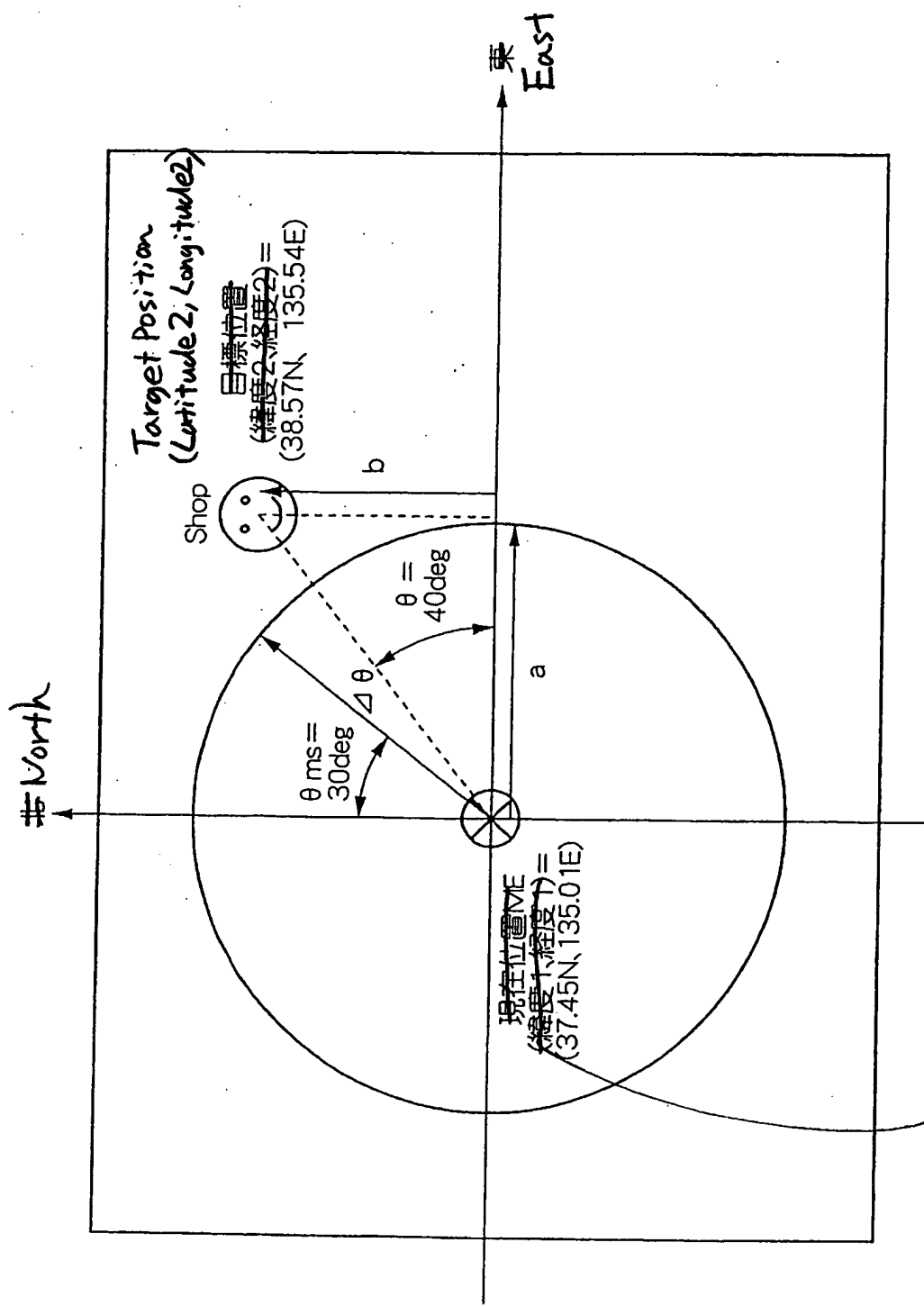


bearing calculation

- S19 a=④ target longitude-② present longitude,  
b=③ target latitude-① present latitude (S19)
- S20 target bearing  $\theta = \arctan(b/a)$   $\Delta \theta = (90 \text{ deg} - \theta \text{ ms}) - \theta$
- S23 reproduce a melody 1
- S25 reproduce a melody 2, highlight the target position icon  
by blinking

Fig. 7



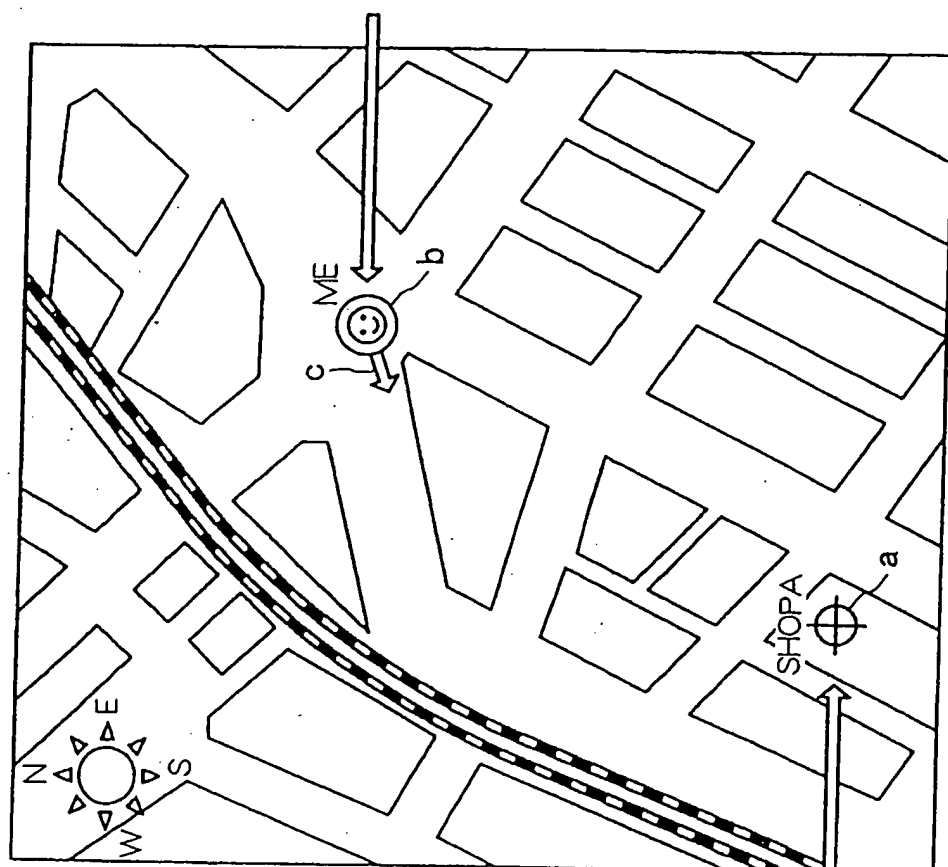


Current Position ME (Latitude 1, Longitude 1)

Fig.8



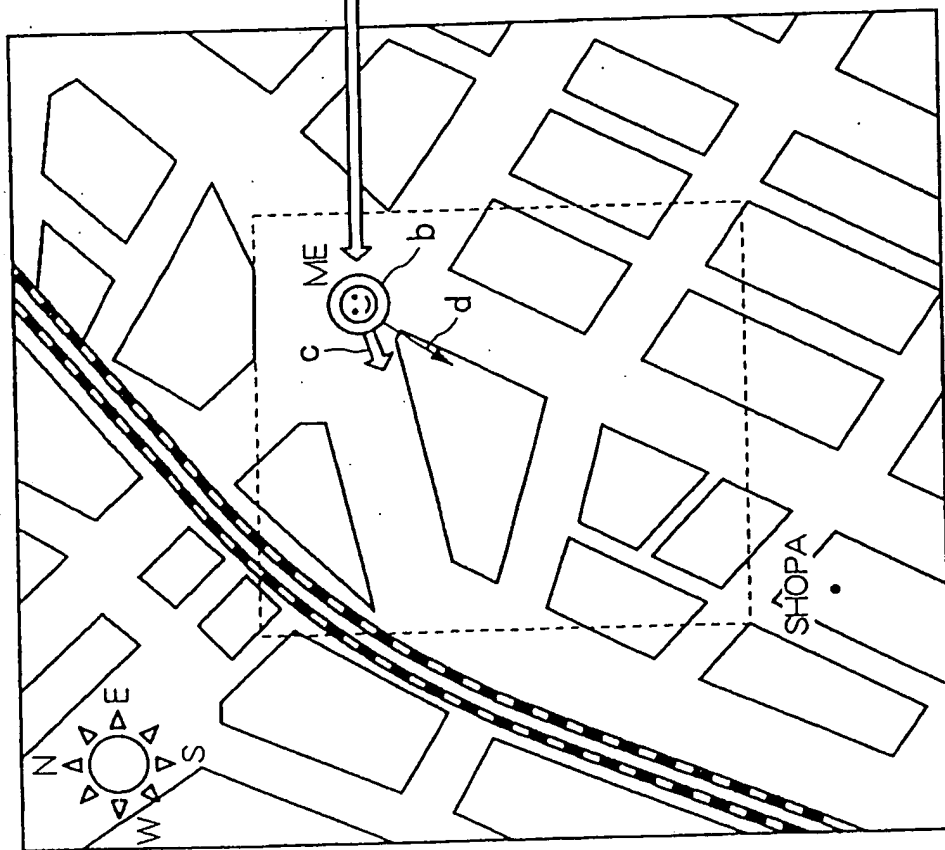
Fig. 9



自己の現在位置と現在方位  
の表示  
Display of user's own  
Current position and  
Current Bearing

目標位置  
の表示  
Display of  
Target Position

Fig.10



自己の現在位置と現在方位と  
目標方位の表示

Display of User's Own Current  
Position, Current Bearing and  
Target Bearing